



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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July 24, 2008

Engineering Field Activity, Midwest

Attn: Mr. Howard Hickey

Building 1A, Code 931

201 Decatur Avenue

Great Lakes, Illinois 60088-5600

Re: Draft Feasibility Study Report for Site 1 -
Golf Course Landfill and Site 4 - Fire
Fighting Training Unit, Naval Station
Great Lakes, Great Lakes, Illinois

0971255048 - Lake
Great Lakes Naval Station
Superfund/Technical

Dear Mr. Hickey:

The Illinois Environmental Protection Agency (Illinois EPA or Agency) is in receipt of the submitted *Draft Feasibility Study Report for Site 1 - Golf Course Landfill and Site 4 - Fire Fighting Training Unit, Naval Station Great Lakes*. It was drafted by Tetra Tech NUS, Inc. on behalf of the Naval Facilities Engineering Command (Navy). It was dated June 2008 and was received at the Agency on June 5, 2008. The purpose of the Feasibility Study (FS) is to develop and evaluate options for a remedial alternative at the subject sites. The Agency has conducted a review of the subject document and has generated the following comments.

- 1) **General Comment** - Since implementation of a presumptive remedy appears to be the Navy's chosen alternative, this FS should really be called a Focused Feasibility Study (FFS).
- 2) **General Comment** - Please ensure that the latest revisions to the RI/RA (text and tables) are carried forward into this FS, since some of those revisions were incorporated after issuance of the FS. This would include any revisions made after June 4, 2008.
- 3) **Section 1.0** - In line 7, the "U" is missing in the parenthesis.
- 4) **Section 1.2.3** - In the second sentence of the first paragraph, suggest changing the word "between" to "during."

- 5) **Section 1.3.1** – This section is titled Nature and Extent of Contamination. However, it does not discuss the extent except to say that contamination appears to be the former landfill and observations of 89 soil borings were utilized to establish a perimeter. Which is being used to determine the site boundaries? Does that area equate to the 50 acres estimated in Section 2.3? These should match. For the purposes of the RI, it was assumed that everything inside those 89 borings was waste, was it not? In Section 1.2.1, the golf course is said to cover approximately 125 acres. Please review and revise as necessary.
- 6) **Section 1.3.1** – The fourth bullet item on page 1-7 concludes by stating, "...PAHs are common anthropogenic contaminants frequently detected as a result of widespread use of petroleum products." While it may be true that those compounds are often detected, it does not account for the data showing "...many results exceeding screening criteria." Suggest removing that statement as the determination to take a remedial action has already been made, so there is no need to downplay the PAH contamination.
- 7) **Section 1.2.3** – In the second paragraph, the name "Beling" is misspelled repeatedly.
- 8) **Section 1.3.2** – In the last paragraph of this section, suggest ending the last sentence by adding the following: ... and the subsequent construction and re-construction of the golf course.
- 9) **Section 1.3.4** – The chemicals of concern (COCs) should be updated based on the latest revisions to the RI/RA. This also applies to the same list in Section 2.1.4.
- 10) **Section 1.4** – The last paragraph discusses the risks posed by the "dilapidated condition of the underground Skokie Ditch sewer pipe." It should also mention here that the potential exists for the transport of landfill waste through the pipe and discharging to surface water.
- 11) **Section 1.5** – In the next to last bullet on page 1-14, it states "...in accordance with seven of the nine CERCLA criteria." This should state "...in accordance with the nine CERCLA criteria." Although the other two criteria cannot fully be discussed at this time, they should not simply be omitted. The State's Acceptance of the remedial alternatives will be provided within this comment letter to the draft FS document. The Community's Acceptance should be addressed if only to state that it is unknown at this time and will be determined during the public comment period for the Proposed Plan. This comment would apply to the last bullet item on this page and be carried forward to the detailed analysis of remedial alternatives in Section 4.3 as well.
- 12) **Figures 1-1 and 1-2** – The site boundary should follow the Geoprobe borings used to delineate the waste (excluding the buildings and parking lots on the east side) rather

than Green Bay Road. Please revise these and any other figures (Appendix A) accordingly.

- 13) **Section 2.0** – In the third sentence, remove the words following “CERCLA” as they are redundant.
- 14) **Section 2.1.1** – Remedial Action Objective (RAO) 5 involves the minimization of infiltration of surface water to the subsurface thereby reducing the potential for leaching of contaminants to ground water or surface water. While this is an important objective and one that is required as part of the presumptive remedy, it does raise one very important question. Within the bounds of the golf course there are at least four separate ponds which contain a large quantity of water. How were those ponds constructed? Do they have some type of liner installed to prohibit the movement of water into the ground surface? It would seem to be a waste of time and money to employ a cap covering the majority of the landfill to manage storm water to keep water out of the waste, yet maintain these ponds which do just the opposite by collecting water and allowing it to infiltrate the ground surface. If the ponds were constructed without some type of liner, logic would dictate that something more must be done for the remedy to comply with this RAO. Please review the pond construction details, if available, and determine whether those ponds comply with this RAO or not. If they do not, the proposed remedy will require modification to correct for this.
- 15) **Section 2.2.1** – One of the bulleted items here is listed as Institutional Controls. There is no discussion of what those controls might include though. Suggest, as is done for Containment two bullets down, providing some clarification as to what those controls might be, e.g. non-residential land use, groundwater use restriction, or prohibition on intrusive activity.
- 16) **Section 2.3** – As noted previously, the actual site area needs to be determined and consistently reported throughout this document. Please update this section as well once this issue is rectified.
- 17) **Table 2-3** – As the presumptive remedy for landfills is containment (a landfill cap with additional measures), portions of the Illinois landfill closure regulations (35 Illinois Administrative Code (IAC) 807 and 811) would also be applicable or relevant and appropriate (ARAR) at this site. Illinois EPA considers the following provisions, specifically, to be either directly applicable or relevant and appropriate:

35 IAC 807.305(c) Final Cover

35 IAC 807.502(a) and (b) Closure Performance Standards

35 IAC 811.110(g) Deed Notification

35 IAC 811.111(c) Post-Closure Maintenance and Frequency of Inspection

35 IAC 811.111(d) Planned Uses of Property
35 IAC 811.314(b)(3)(ii) Final Cover Permeability
35 IAC 811.314(c)(1) and (3) Final Protective Layer
35 IAC 811.318 Groundwater Monitoring Systems
35 IAC 811.319 Groundwater Monitoring Programs
35 IAC 811.320 Groundwater Quality Standards
35 IAC 811.324 Corrective Action Measures

- 18) **Section 3.2.4.2** – There are several grammatical errors in the first paragraph. Please review and revise as necessary.
- 19) **Section 3.2.4.3** – The sediment protection is described here as “riprap lining.” Please clarify for the reader exactly what a riprap lining would entail.
- 20) **Section 4.3.1.2, Compliance with ARARs and TBCs** – This alternative would also not comply with the landfill closure requirements listed as being ARAR above.
- 21) **Section 4.3.2.1** – Under Component 1, please define riprap as is done for the in-situ cap.
- 22) **Section 4.3.2.1** – Under Component 1, if the Skokie Ditch Infrastructure is relocated to an area outside the waste, is the current ditch still necessary? Would there be enough overland runoff to warrant maintaining a ditch of this size? Was there any thought to filling in a portion or the entirety of the ditch, post-relocation, with clean clay consistent with the remainder of the in-situ cap? Once filled in, the need for ongoing maintenance of the ditch would be significantly reduced. This option would also be more effective at reducing the potential for migration of COCs either through diffusion from sediment to surface water or through erosion and spreading of contaminated sediment.
- 23) **Section 4.3.2.1** – Under Component 2, suggest rewording the last sentence as follows, “... to protect workers, *to ensure that the in-situ cap is repaired appropriately and in kind, consistent with the materials, and their specifications being disturbed,* and to confirm proper management of contaminated materials.”
- 24) **Section 4.3.2.1** – Under Component 3, it states, “After two years recommendations to reduce parameters and frequency will be made.” The State cannot agree to such a statement. It is true that this was allowed at other landfill sites, but those sites had already been collecting groundwater data to which the new data could be added. Therefore, there was, all-included, a much larger set of data upon which to make such a determination. Depending on the monitoring sample results, a request to reduce parameters and frequency may be made after five years of monitoring. Please refer to

35 IAC 811.319(a)(1)(A) for the requirements for monitoring. This comment would apply to Figure 4-1 as well.

- 25) **Section 4.3.2.1** – Under Component 3, suggest changing the word “will” in the next to last sentence to “may”.
- 26) **Section 4.3.2.2** – Under Reduction of Toxicity, Mobility, or Volume through Treatment, the surface water controls/sediment controls would also reduce the mobility of the contaminated sediment via diffusion or erosion.
- 27) **Section 4.3.2.2** – Under Implementability, it should be stated here that the site would need to be added to the LUCMOA with the addition of a Land Use Control Implementation Plan (LUCIP) to the appendix of that document. This would require an annual review of the specified controls to ensure they were being maintained and properly enforced.
- 28) **Sections 5.1.4 and 5.1.6 and Table 5-1** – Refer to the comments made previously regarding these section headings under Section 4.3.2.2.
- 29) **General Comment** – Alternative 1, the No Action Alternative, would be completely unacceptable to the Agency. It would not comply with ARARs and would not be protective of human health and the environment.
- 30) **General Comment** – Provided the potential issue regarding the lining of the ponds can be resolved satisfactorily, Alternative 2, Containment, Institutional Controls, and Monitoring (Presumptive Remedy), would be protective of human health and the environment and would comply with ARARs to the maximum extent practicable, depending on which option is chosen for the Skokie Ditch Repair/Relocation. Given the location and current use of the landfill, as a golf course, selection of this alternative as the Presumptive Remedy would be acceptable to Illinois EPA. Although, the determination of which option is chosen for the Skokie Ditch Repair/Relocation is not the Agency’s to make, the State would prefer the implementation of Option 3, due to the avoidance of landfill waste to the maximum extent possible and the removal of a potential pathway for contamination to leave the site. It would also avoid subsequent contact with landfill waste due to unexpected maintenance to the storm water pipes in the future.
- 31) **Appendix A** – Options 2 and 3 both include grouting of the old pipes and both list 600 cubic yards as the quantity of grout required. That value is accurate based upon the size and length of the pipes. However, given the condition of those pipes, which is stated here as deteriorated, and the fact that there have already been sinkholes created which washed out fairly large areas of soil (large enough to engulf a truck), suggest allowing a

margin of error of as much as 15 percent or more to account for potential cracks/breaks in the pipe and any washed out areas in the surrounding soil/waste.

- 32) **Appendix A** – The Technical Memorandum should be reviewed for typographical and grammatical errors and omissions and revised as necessary.

If you have any questions regarding anything in this letter or require any additional information, please contact me at (217) 557-8155 or by electronic mail at Brian.Conrath@illinois.gov.

Sincerely,

Brian A. Conrath

Brian A. Conrath
Remedial Project Manager
Federal Facilities Unit
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cc: Bob Davis, Tetra Tech NUS, Inc.

Owen Thompson, USEPA (SR-6J)